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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,912

10/13/2006

Michael Peszynski

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

PIHULIC, DANIEL T

ART UNIT

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3662

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,912	Applicant(s) PESZYNSKI ET AL.	
	Examiner Dan Pihulic	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's arguments, filed 12-15-2008, are moot in view of the new grounds of rejection made in view of US6551248 cited in applicant's specification.
2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they will not be listed on the first page of the patent if the application issues.
3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
4. Claims 1-6 and 8-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 35 recites the phrase "means for splicing " in line 2; and
claim 35 recites the phrase "display means for" in line 3.

These phrases are not modified by sufficient structure, material, or acts for achieving the specified function in the claims and there does not appear to be a definition in the specification for these phrases.

Also the term "anddisplay" in claim 35, line 3, appears to be misspelled.

Also there is an undue multiplicity of claims and applicant is required to select no more than 25 claims (which the patent office has indicated as adequate for applications and recently upheld in federal court to prevent a few applications from draining a disproportionate amount of office resources) for further examination (see MPEP 2173.05(n)).

5. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

In this application current claims 26-29 and 31, do not meet this criteria.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6 and 8-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US5957850 or US6162175 in combination with US6551248. The US5957850 or US6162175 references disclose the utilization of an ultrasound imaging probe (see the abstract) comprising: a first ultrasound imaging transducer array (46) subassembly having a first image field of view; and a second ultrasound imaging transducer array (48) subassembly having a second image field of view, the second ultrasound imaging transducer array subassembly being disposed at an angle greater than or equal to ninety degrees and less than or equal to one hundred eighty degrees (see figures 3, 7, 8, 28, 31 and 38) with respect to the first ultrasound imaging transducer array

subassembly, wherein the second image field of view includes a portion thereof that is different from the first image field of view (see figures 3, 7, 8, 28, 31 and 38) and wherein the first image field of view and the second image field of view together provide a combined image field (see figures 3, 7, 8, 28, 31 and 38) of view as recited in claims 1 and 9. The difference between the US5957850 or US6162175 references and claims 1 and 9 is that the claim recites the utilization of a flat matrix sensor assembly. The US6551248 reference teaches that it was well known in the art to utilize a flat matrix sensor assembly in an ultrasonic imaging devices. It would have been obvious to modify the US5957850 or US6162175 references to utilize a flat matrix sensor assembly as motivated by the US6551248 reference to enable the US5957850 or US6162175 system to take advantage of the well known characteristics of integrated circuits such as smaller size.

With regards to claim 2, the US5957850 or US6162175 references disclose the combined image field of view further includes a portion thereof in common with both the first and second image fields of view (see figures 3, 7, 8, 28, 31 and 38) .

With regards to claim 3, the US5957850 or US6162175 references disclose the second field of view overlaps with the first field of view in an image splice area (see display 222 of figure 38).

With regards to claim 4, the US5957850 or US6162175 references disclose the utilization of a housing (138 and 142).

With regards to claim 5, the US5957850 or US6162175 references disclose the first (136) and second (140) ultrasound imaging transducer array subassemblies are further disposed within the housing (138 and 142) along a principal axis of the housing (see figure 28).

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With regards to claim 6, the US5957850 or US6162175 references disclose the first and second ultrasound imaging transducer array subassemblies are further disposed within the housing canted at an angle to a principal axis of the housing (see figure 8).

With regards to claims 8 and 10, the US5957850, US6162175 and US6551248 references disclose the utilization of integrated circuits.

With regards to claim 10, the US5957850 or US6162175 references disclose the utilization of acoustic windows (138 and 142) and cables (134).

With regards to claim 11, the US5957850 or US6162175 references disclose the utilization of a first transmit and receive beamformers (200 & 209).

With regards to claim 12, the US5957850 or US6162175 references disclose the utilization of a second transmit and receive beamformers (216 & 218).

With regards to claim 13, the US5957850 or US6162175 references disclose the utilization of a cylindrical probe (see figures 2 and 3).

With regards to claim 14, the US5957850 or US6162175 references disclose the a scanning direction (x) perpendicular to the principal axis of the probe (see figure 8).

With regards to claim 15, the US5957850 or US6162175 references disclose a probe capable of being used in a cavity (see column 1, line 29).

With regards to claim 16, the US5957850 or US6162175 references disclose the utilization of first (166), second (170) and third (174) ultrasound imaging transducer array subassemblies (see figure 31).

With regards to claim 17, the US5957850 or US6162175 references disclose the utilization of a housing (168, 172 & 176).

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With regards to claim 18, the US5957850 or US6162175 references disclose the first (166), second (170) and third (174) ultrasound imaging transducer array subassemblies are further disposed within the housing (168, 172 & 176) along a principal axis of the housing (see figure 31).

With regards to claim 19, the US5957850 or US6162175 references disclose the utilization of a housing (168, 172 & 176), wherein the first (166) and second (174) ultrasound imaging transducer array subassemblies are disposed within the housing along a principal axis of the housing to provide the combined image field of view around a periphery of the housing; and a third (170) ultrasound imaging transducer array subassembly having a third image field of view, the third ultrasound imaging transducer array subassembly being disposed within the housing and canted at an angle with respect to the principal axis of the housing, wherein the third ultrasound imaging transducer array subassembly provides a forward looking image field of view ahead of the housing..

With regards to claims 20-29 and 31, the US5957850 or US6162175 references disclose the utilization of two or more ultrasonic transducer subassemblies (column 14, lines 42-43).

With regards to claim 24, the US6551248 reference teaches that it was well known in the art to utilize a flat matrix sensor assembly in an ultrasonic imaging devices.

With regards to claim 25, the US5957850, US6162175 and US6551248 references disclose the utilization of integrated circuits.

With regards to claim 26, the US5957850 or US6162175 references disclose the utilization of transmit and receive beamformers for each ultrasonic transducer subassembly (see figure 38).

With regards to claim 27, the US5957850 or US6162175 references disclose the utilization of a cylindrical probe (see figures 2 and 3).

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With regards to claim 28, the US5957850 or US6162175 references disclose scanning of the subassemblies (see figure 39).

With regards to claim 29, the US5957850 or US6162175 references disclose a probe capable of being used in a cavity (see column 1, line 29).

With regards to claims 30-32, the US5957850 or US6162175 references disclose the utilization of a controller (220) coupled to the first (46) and second (48) ultrasound imaging transducer array subassemblies for combining ultrasound imaging information received from the first and second ultrasound imaging transducer array subassemblies to produce data representative of a combined field of view (222) ultrasound image (see figure 38).

With regards to claims 33 and 34, the US5957850 or US6162175 references disclose the utilization of transmit and receive beamformers (see figures 38 to 40)

With regards to claim 35, the US5957850 or US6162175 references disclose the utilization of means (220) for splicing the first and second field of view images into the combined field of view image; and display means (222) for displaying the combined field of view image.

With regards to claim 36, the US5957850 or US6162175 references disclose fabricating an ultrasound imaging probe comprising: providing a first (46) ultrasound imaging transducer array subassembly and having a first image field of view; and coupling a second (48) ultrasound imaging transducer array subassembly having a second image field of view to the first ultrasound imaging transducer array subassembly and being disposed at an angle greater than or equal to ninety degrees and less than or equal to one hundred eighty degrees with respect to the first ultrasound imaging transducer array subassembly, wherein the second image field of view includes a portion thereof that is different from the first image field of view and wherein the first image field of view and the second image field of view together provide a combined image field

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of view (see figure 38); and the US6551248 teaches that is well known to utilize flat matrix sensor assemblies in ultrasonic imaging devices.

Overall the combination of reference would have provided expected results to one of ordinary skill in the art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pihulic whose telephone number is 571-272-6977. The examiner can normally be reached on Tuesday through Thursday and every other Monday and Friday from 5:30 a.m. to 4 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza, can be reached on 571-272-6979.

The fax phone numbers for the organization where this application or proceeding is assigned are:

571-273-8300 for official responses, and

571-273-6977 for unofficial communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the telephone number 800-786-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

**/Dan Pihulic/
Primary Examiner, Art Unit 3662**